ESA IRIS

NETWORK AND SERVICE MANAGEMENT

ESA IRIS CONCEPT OF OPERATIONS DEVELOPMENT

The European Space Agency's (ESA) IRIS Data Link Service (DLS) satellite system is the outcome of a programme aimed at making aviation safer, greener and more efficient through a new satellite-based air–ground communication system for Air Traffic Management (ATM). This was funded and promoted by ESA in partnership with Inmarsat and industry. In support of this programme, our client, a leading global network satellite operator, needed to adapt and enhance its existing Commercial Operating Model for the provision of improved aviation safety communication services to address the future European wide harmonised Continental and Oceanic ATM Standards.

Telespazio UK, though its recent acquisition of e2E, developed a detailed Concept of Operations (CONOPS) document, addressing different Operating Models, Operational Scenarios and Processes. Both Operational Research and Operational Analysis techniques were used to capture organisational, system and process requirements for the management of the IRIS safety services and assess the effectiveness of the operational infrastructure to handle these services.

The Enhanced Telecom Operations Map (eTOM) Service Management framework was used to identify the key Operational Scenarios for Assurance, Fulfilment (provisioning) and Billing. Changes were identified between the existing operational processes for core communication service operation and the IRIS specific service operation.

As a result of the changes adopted in the operational model, our approach for the definition of new CONOPS delivered a much enhanced Operating Process Model and contributed to define in detail Key Performance Indicators (KPIs), e.g. quality of service, response times, to measure actual efficiency, previously unexpressed. Our model ensured the operation of reliable future-proofed commercial aviation safety services with minimal impact on the existing Commercial Service operation. The new set of KPIs identified by our engineers are currently used for measuring the end-to-end efficiency increase on deploying the enhanced operational model processes.

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